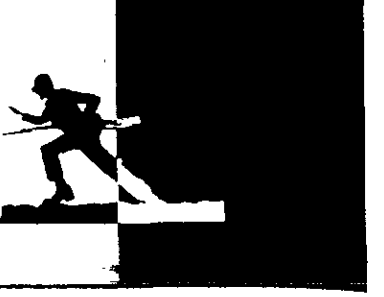
INFANTRY NEWS



THE INFANTRY ISSUES and Lessons Learned System consists of a software package and Infantry database that runs on IBM-compatible personal computers. (See "Infantry Issues and Lessons," by Jan Chervenak and Eric J. Lynam, INFANTRY, July-August 1988, pages 11-12.)

The system provides a current source of unclassified, Infantry-related observations and issues from NTC rotations, major exercises, military operations, special events, unit initiatives, historical sources, and TRADOC-sanctioned unit visits. It is available to infantry units, battalion level or higher, in the Active Army, Army National Guard, or Army Reserve, and is mailed only to unit addresses.

The Infantry School can now make copies of the database on 3½-inch microdisks as well as on 5¼-inch disks. To obtain copies, units may mail either six blank 3½-inch disks or ten blank 5¼-inch disks to Commandant, U.S. Army Infantry School, ATTN: ATSH-ES, Fort Benning, Georgia 31905-5420.

Questions concerning the package may be directed to the Infantry Hotline, AUTOVON 835-7693, or commercial (404) 545-7693.

THE INFANTRY SAFETY Lessons Learned database is an Infantry School effort to help commanders and leaders meet their responsibilities for conducting safe training and operations.

This useful information is available to the field through two user-friendly databases that can be searched by subject area. One method of access is the Infantry section of the Safety Information Library in the Army Safety Management Information System (ASMIS). This is a modem-accessed database that is continuously updated and available through personal computer or installation safety offices.

The second way to obtain the information is through the Infantry Issues and Lessons Learned database (see item above).

More information is available through the Infantry Hotline, AUTOVON 835-7693, or commercial (404) 545-7693.

THE U.S. ARMY OFFICER Candidate Alumni Association will hold a general membership meeting at Fort Benning, Georgia, 30 August-1 September 1989. The planned activities include a business meeting, military demonstrations, a visit with officer candidates in their battalion area, a "Turning Blue" Senior Status Review, and a banquet.

At the business meeting, a new constitution and by-laws will be presented for the members' consideration. This will give members an opportunity to help decide what the association will do in the future and how it will operate. There is still time for new members to join and attend the meeting.

Three types of membership are available:

- Active memberships for persons of any branch of the Army who graduated from the Officer Candidate School (OCS) at Fort Benning, Georgia, or from the Ground General School at Fort Riley, Kansas, and who subscribe to the purposes for which the association was formed.
- Associate memberships for officers who did not graduate from OCS but who served as cadre at the school at Fort Benning or Fort Riley, and who subscribe to the purposes for which the association was formed.
- Corporate memberships for corporations that subscribe to the purposes for which the association was formed and who pay an annual membership fee determined by the Executive Council.

Current dues for active and associate members are $10 for one year or $100 for a lifetime membership.

Further information can be obtained from the Secretary, U.S. Army OCS Association, P.O. Box 2192, Fort Benning, GA 31905.

ADVANCED COMBAT RIFLE (ACR) prototypes are now being tested by the Army, and a new rifle could be in the hands of soldiers as early as 1995.

The ACR is still in the concept and design phase at the Armament Research, Development, and Engineering Center, Picatinny Arsenal, New Jersey. Four prototypes are undergoing a one-year period of extensive engineering, safety, and performance testing.

Engineering and safety tests were initiated in early April 1989 by the Army's Combat Systems Test Agency at Aberdeen Proving Ground, Maryland, and ran through May. A follow-on field experiment will be conducted from August 1989 through April 1990 at Fort Benning, where the Army and Air Force will test the weapons under simulated combat conditions on a specially designed range. As a control measure, the Army's M16A2 rifle will be tested alongside the other weapons.

The four prototype weapons were developed by AAI Corporation, Colt Industries, Heckler & Koch, and Steyr-Mannlicher:

- The AAI weapon, a gas-operated, magazine-fed flechette firing rifle, is of the more traditional, full-stock design. Its long and unobscured upper surface helps the shooter point the weapon. The major internal mechanism modification is an entrapped gas operating system. With this design, gases enter a cylinder through the gas port in the barrel and act upon a piston to provide the energy for operation.

The AAI projectile is a 10.2-grain finned steel dart, or flechette. The shaft

of the flechette has a diameter of roughly 1/16-inch diameter and a length of approximately 1 5/8 inches, with fins at the rear end and a sharpened point at the front.

• The Heckler & Koch weapon is a gas-operated weapon in a bullpup configuration that uses caseless ammunition. It features a four-position selector switch—safe, semi-automatic, three-round salvo burst, and fully automatic.

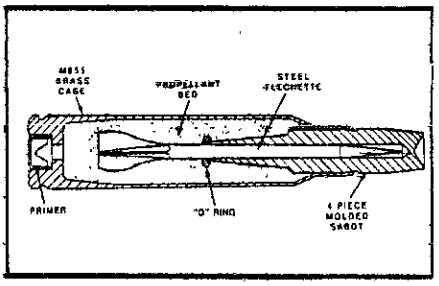
The optic of the weapon is built into the carrying handle and is not removable. The day optic provided has a 1:1 magnification for short ranges and a 3.5:1 magnification for ranges beyond 300 meters.

The ammunition is of square cross section about 5/16-inch on a side by roughly 1 1/4 inches long. Because of this shape, a single-row magazine of 50-round capacity is used. The magazine, being quite long, is affixed to the weapon on top of the barrel and serves as a pointing aid the shooter can use during rapid engagements. The 4.92mm projectile is fully telescoped within the propellant body and held in the machined cavity by a plastic end cap.

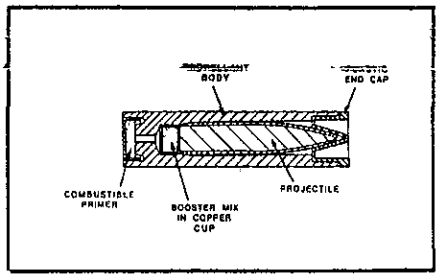
• The Steyr-Mannlicher is a bullpup-style 5.56mm weapon that features a rising chamber mechanism and a slide-initiating round. One of its major features is a stock "well" at the muzzle so that it retains the ability to use finned muzzle launched ordnance. A long shotgun-style rib and carrying handle along the top surface serves as a pointing device for rapid target engagement. The iron peep sight is removable and is interchangeable with the company's preferred day optic sight.

The plastic-cased flechette round is approximately 3/8-inch in diameter by 1 3/4 inches long.

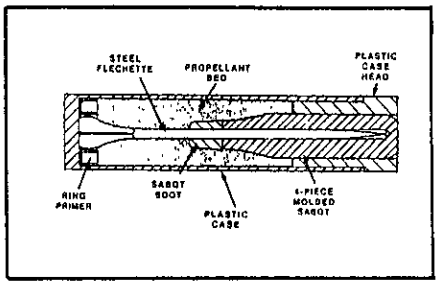
• The Colt Industries weapon is an air-cooled, gas-operated, magazine-fed derivative of the current M16A2. The vari-



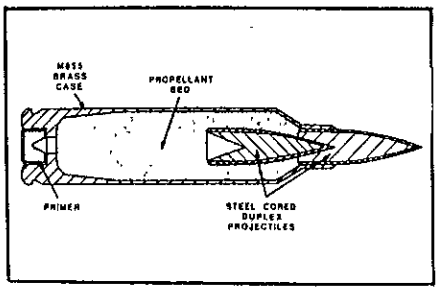
AAI Rifle and Cartridge



Heckler & Koch Rifle and Caseless Cartridge



Steyr-Mannlicher Rifle and Cartridge



Colt Rifle and Duplex Cartridge

ations stem from extensive human engineering as well as an interchangeable duplex ammunition round.

The newly designed contoured handguard includes a heat resistant inner shield, air cooling vent holes, a front-end hand restricting ring, and an aiming/pointing rib on the upper surface for quick target engagement. The pistol grip is similar to that on the M16A2, with additional length and a different profile for added comfort.

The telescoping buttstock incorporates a cheek-piece on both sides and allows for an adjustment of pull length to fit individual soldiers.

The Colt weapon fires the standard 5.56mm M855 NATO round as well as the Colt-Olin developed duplex ammunition. Both ammunition types use the same M855 brass case.

THE INTEGRATED Individual Fighting System (IIFS) is being developed by the U.S. Army Natick Research, Development, and Engineering Center. It consists of three new equipment items, the tactical load bearing vest, the large field pack with internal frame, and the extreme cold weather sleeping system.

The goal of the program is to reduce weight and bulk while improving the comfort and efficiency of the soldier. This goal has been accomplished through reductions in the weight of materials and improvements in the distribution of a soldier's load. Two of the components, the pack and the sleep system, are based on commercial items that have been modified to meet the needs of the combat soldier.

The tactical load bearing vest is designed to be a more effective method of transporting the fighting load. It will replace the present combat suspenders and ammunition carriers, and allows a more even load distribution over a soldier's upper torso, closer to the body's natural dynamic center of gravity. This increases comfort and load stability.

The ammunition and grenade pockets are permanently attached and have a capacity of six 30-round magazines and two fragmentation grenades. The vest is a "one-size-fits-all" design.

The large field pack with internal frame, which will replace the large ALICE rucksack, is being developed as a more efficient method of transporting the mission and existence loads. It has an internal frame and a narrow profile that improve the center of gravity by 27 percent over the ALICE rucksack. The new pack system offers a fully adjustable suspension that will permit a soldier to position it where it best suits his body size.

Large Field Pack (left) and Combat Patrol Pack

The cover can be removed and worn as a combat patrol pack that has 1,200 cubic inches of capacity for use on missions of short duration. In addition, for the first time, a sleeping bag compartment has been included to help protect the bag and to overcome the present inconvenience of tying the bag to the outside of the field pack.

The extreme cold weather sleeping system, made entirely of synthetics, meets the requirements of providing four hours of sleep at −60 degrees Fahrenheit through the use of the insulating layers of the extended cold weather clothing system, which soldiers will wear in layers as needed to supplement the sleep system.

The sleep system, which will replace the standard extreme cold weather sleeping bag, weighs nine pounds—one pound less than the standard sleep system—and has 25 percent less bulk. It has a lightweight continuous filament polyester insulated sleeping bag that dries faster than a down bag and performs better even when it is wet. The removable Gore Tex cover improves the bag's environmental protection by keeping it dry and resisting the wind.

The Integrated Individual Fighting System was type classified in June 1988.

THE INFANTRY BOARD tested the Precision Gunnery Training System (PGTS) for the Infantry School and the U.S. Marine Corps in September and October 1988. The purpose of the test was to assess the effectiveness of the PGTS and also the test programs of instruction (POIs) in training TOW gunners. PGTS is a possible replacement for the M70 TOW training device now used in the POI.

The current TOW gunnery training POI does not provide an indicator of live fire performance. In addition, the M70 equipment is difficult to maintain because of insufficient repair parts and the wear and tear associated with the device's continual use.

The test included both an indoor and an outdoor PGTS for evaluation. The indoor PGTS uses a standard TOW II launcher with a special sight unit that replaces the standard TOW sight. Simulated target engagements (battlefield noises, targets, missile flights) are depicted in the special sight unit.

The device uses scenarios that were previously filmed and recorded on video disks. A soldier can hear the simulated blast of a TOW and the "singing" of the wire through a headset. The instructor can see the same engagement on a video monitor and can critique the gunner's performance on various scenarios by using the instructor console.

The outdoor PGTS is similar to MILES in that it uses a laser emitter mounted inside the TOW II launch tube. A retroreflector assembly can be mounted on any type of target at any distance up to the TOW II's maximum range. The instructor monitors the gunner's skills in target engagement and tracking by viewing a digital display panel.

Ninety gunners were used to evaluate the test POIs: 20 Marines and 40 soldiers who had a limited amount of TOW training and 20 Marines and 10 soldiers who were experienced TOW gunners.

The tests were conducted in two phases using a different POI for each phase. The Phase I POI included both the indoor and the outdoor PGTS; the Phase II POI used the indoor PGTS only.

At the completion of each phase of training, each gunner fired one inert TOW missile at a flanking target moving at 15 kilometers per hour at a range of 1,950 meters. Live fire performance hit data was collected and the overall percentage of hits was computed. Data was also collected on human factors, safety, training, reliability, availability, and maintainability.

Although the overall TOW live fire results by POI group were acceptable in both phases, the scores the gunners achieved on the PGTS did not accurately predict live fire results. Both the indoor and outdoor versions had reliability problems. Dust and grit contaminated the electronic components of the indoor PGTS. The outdoor version consistently malfunctioned when the M80 blast simulator was fired, and it was also adversely affected by inclement weather. Moisture fogged the mirrors on the outdoor components, and these items had to be disassembled and wiped clean. These problems were considered by the contractor and proposed fixes have been approved.

The instructors' comments were favorable concerning the use of the PGTS as a training aid in TOW gunnery.

The Infantry School and the Marine Corps will use the test results to support decisions in developing training strategies and in obtaining appropriate training devices.

AN AIR ASSAULT School for National Guardsmen has been established by the Oklahoma National Guard, and it can be used by the Guard units of other states as well.

Before the school was started about a year ago, the Guard's soldiers—officer or enlisted—who wanted air assault training had to compete for a limited number of slots in the Active Army's air assault schools.

In its first year, Oklahoma's school graduated 448 students, and plans have been developed to offer classes for up to 1,400 students during Fiscal Year 1990.

Located at Camp Gruber, a former World War II training post near Muskogee, Oklahoma, the school has an obstacle course, a one-mile running track, three towers—15-foot, 34-foot, and 60-foot—for rappelling, and landing zones for practical exercises. It was accredited by TRADOC in August 1988.

Guardsmen in any MOS who want to apply for the school should fill out NGB Form 64 and forward it through command channels to the school's branch of their state headquarters.

THE M16A1 RIFLE GRIP (NSN 1005-00-056-2250) is no longer being procured by the Defense Construction Supply Center. The current M16A2 rifle grip (NSN 1005-01-148-4805) is the one units should requisition.

Any unit ordering this item will also need to order a machine screw (NSN 5305-01-268-1191). The washer (NSN 5310-00-527-3634) can be used on either grip.